

Hardware *BXF*

Flight Hardware in MSG

Electrical
Feed Thru
Connectors

CV

Viewing
Window

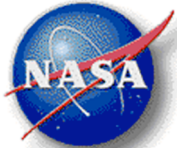
HSC
Camera
And
Microscopic
Lens

HSC
Processor

AB

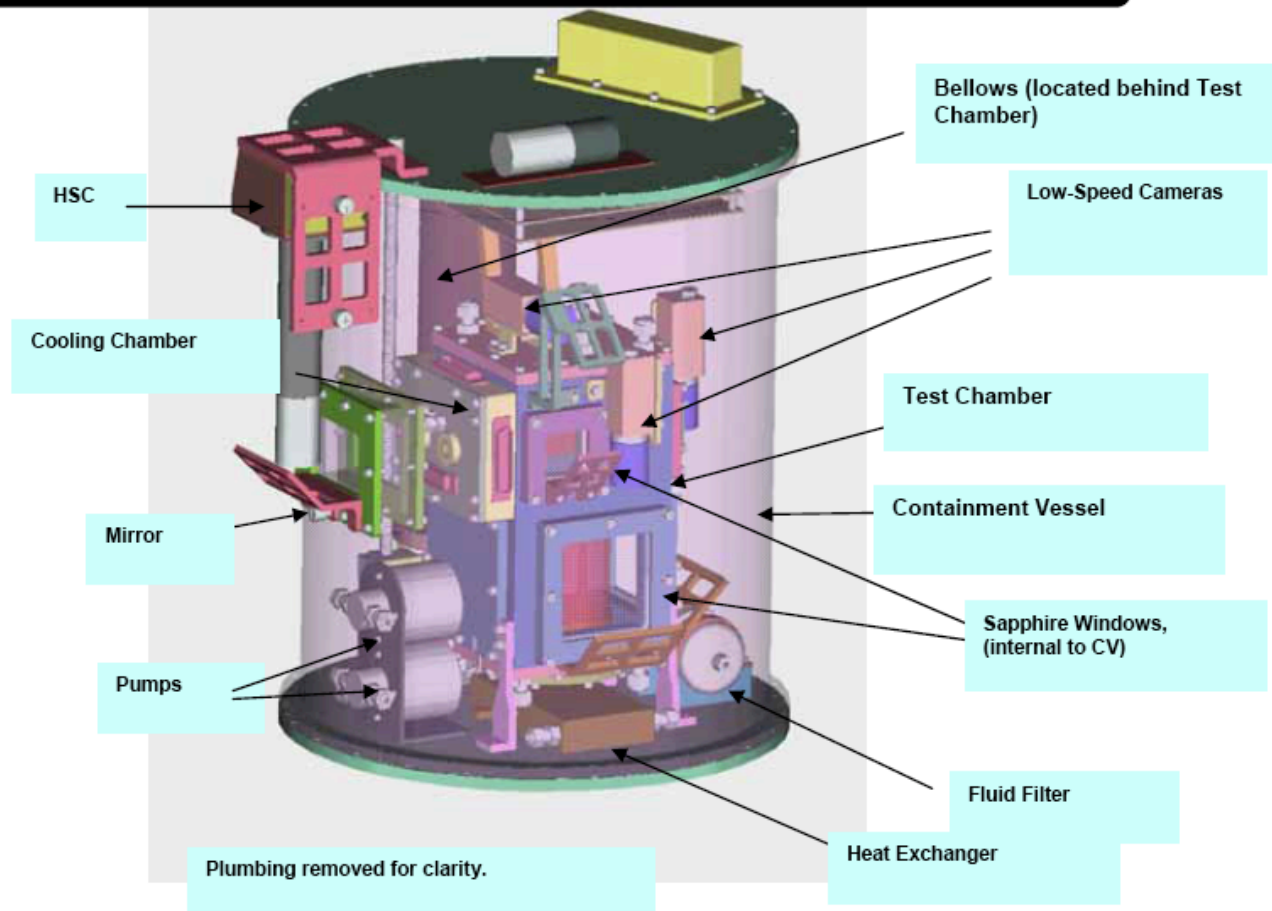
Mirror

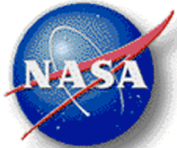




Hardware *BXF*

BXF Containment Vessel



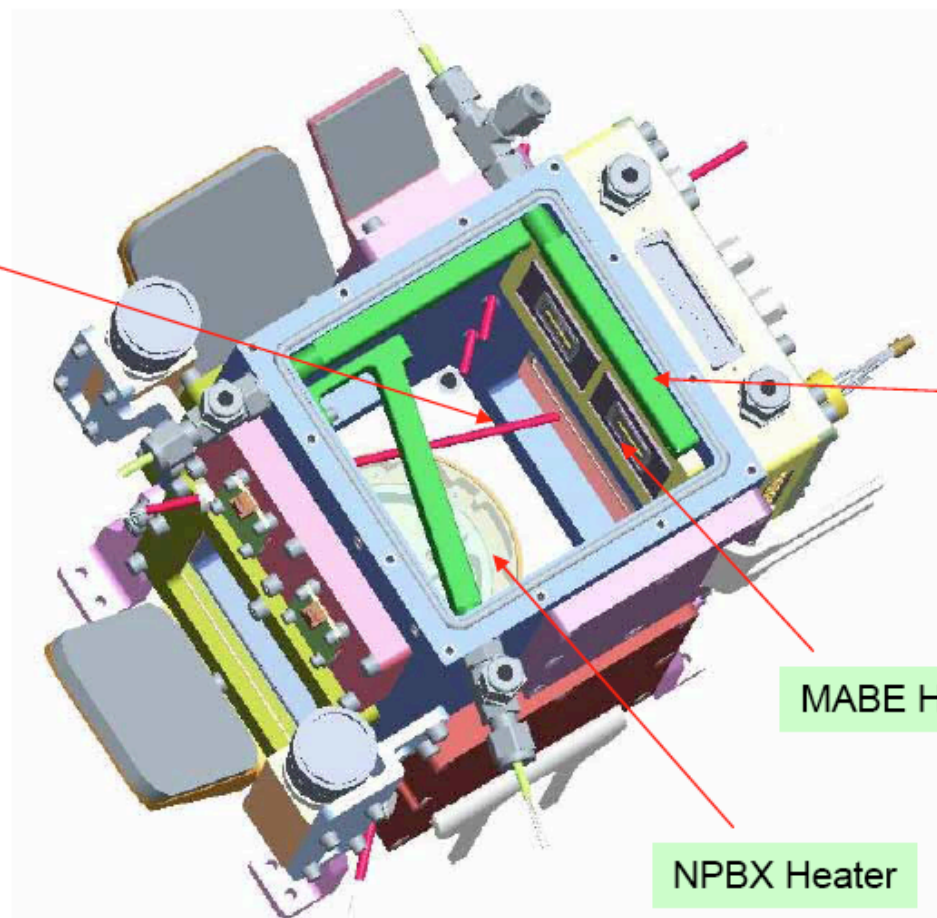


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Test Chamber *BXF*

TC Top View

Temperature
Probes
(Typical, 6 places)



Cartridge
Heater
(3 places)

MABE Heater

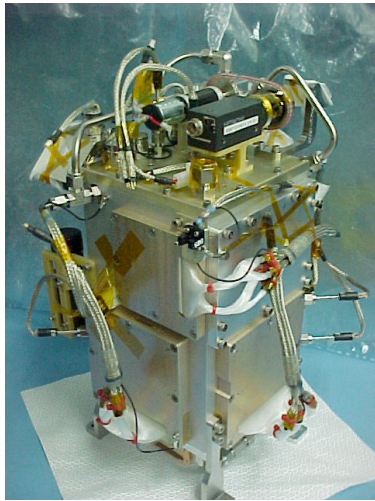
NPBX Heater



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Flight Hardware Components

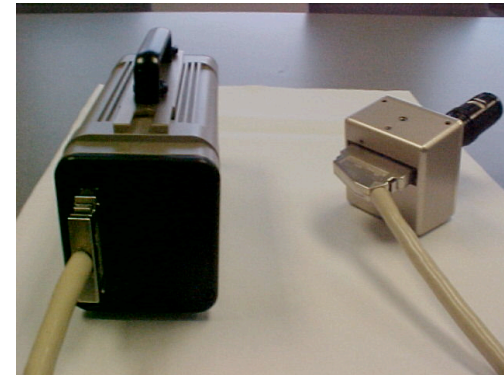
BXF



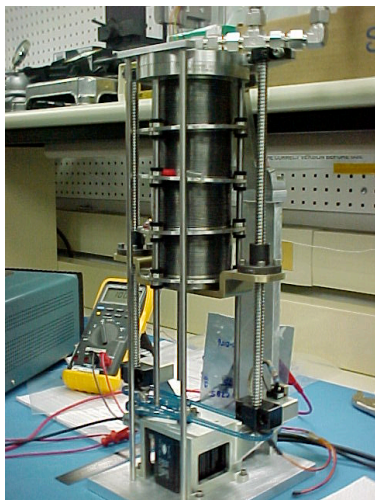
Test Chamber



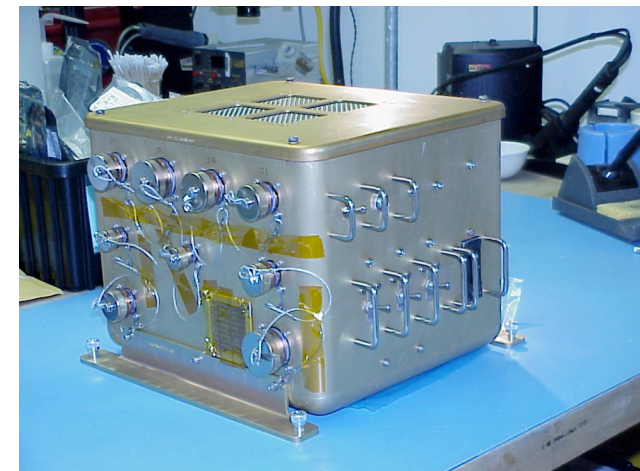
*Containment Vessel (CV)
Being Leak-Tested*



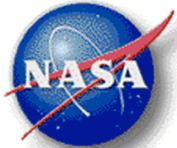
*High Speed Camera (HSC)
Processor & Camera Head*



*Pressure System Bellows
cycle life test*

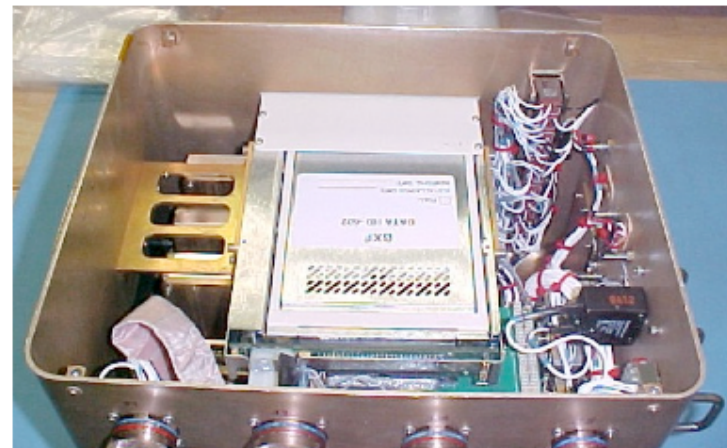
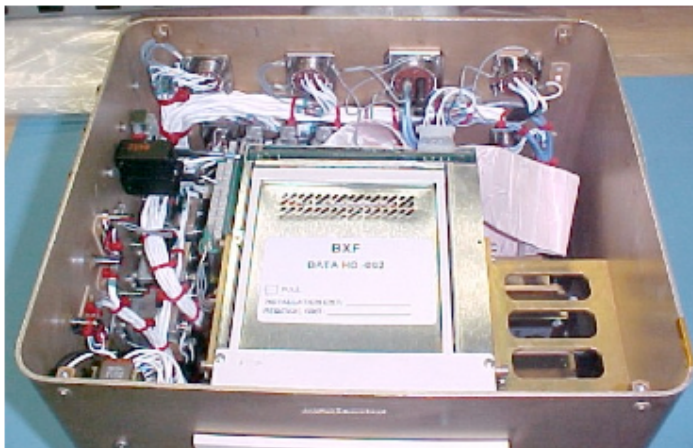


Avionics Box (AB)

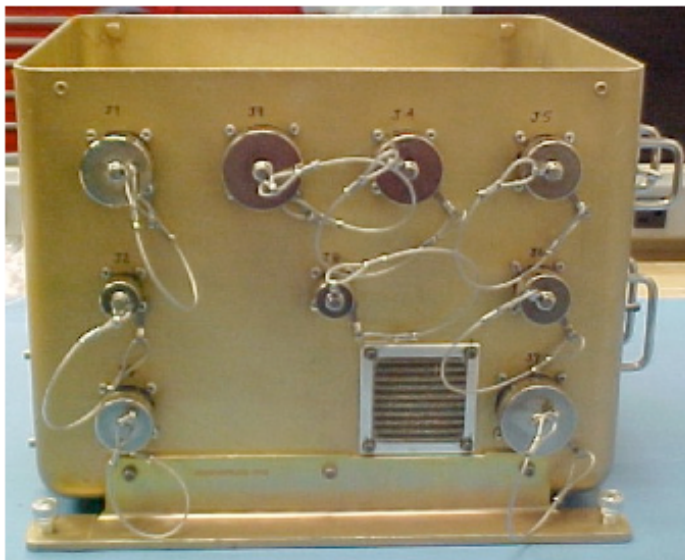


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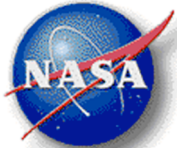
Avionics Box *BXF*



Flight Avionics Box - cover removed

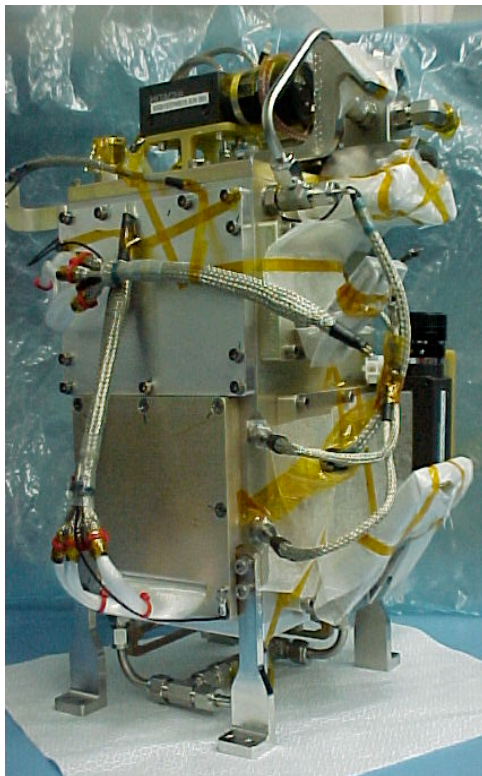


Avionics Box Trainer

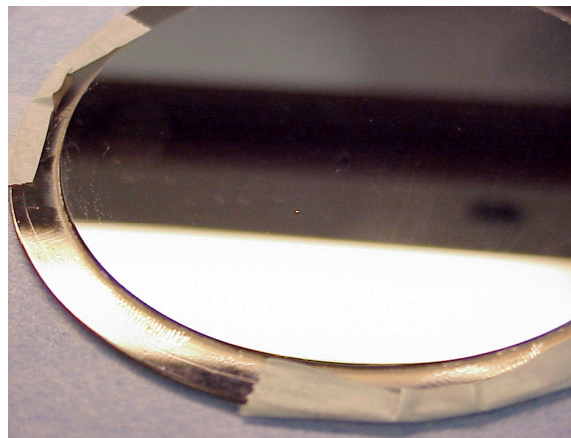


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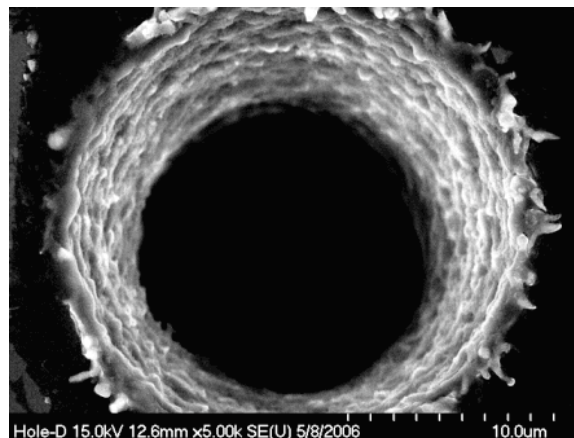
Flight Hardware *BXF*



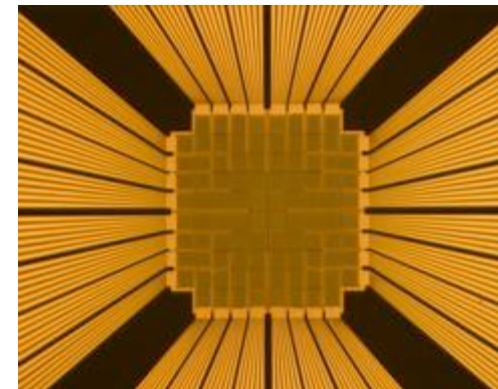
Test Chamber



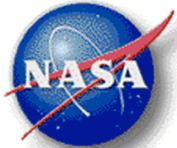
NPBX Heater, Top Surface



*Scanning Electron Microscope
image of NPBX heater nucleation
site (10 μ m diameter hole)*

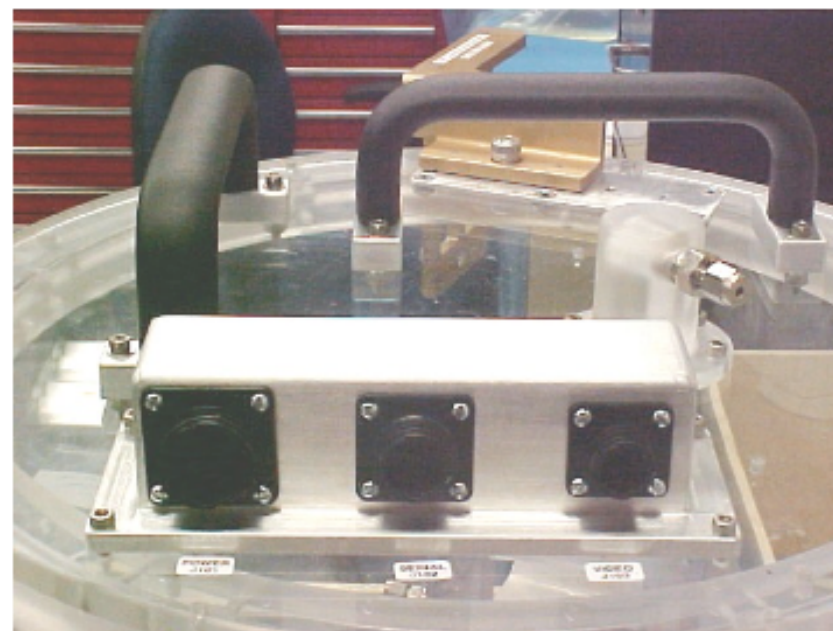


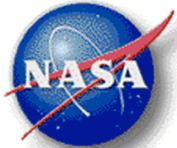
*MABE heater array of 96
individually controlled heaters*



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Containment Vessel Trainer *BXF*

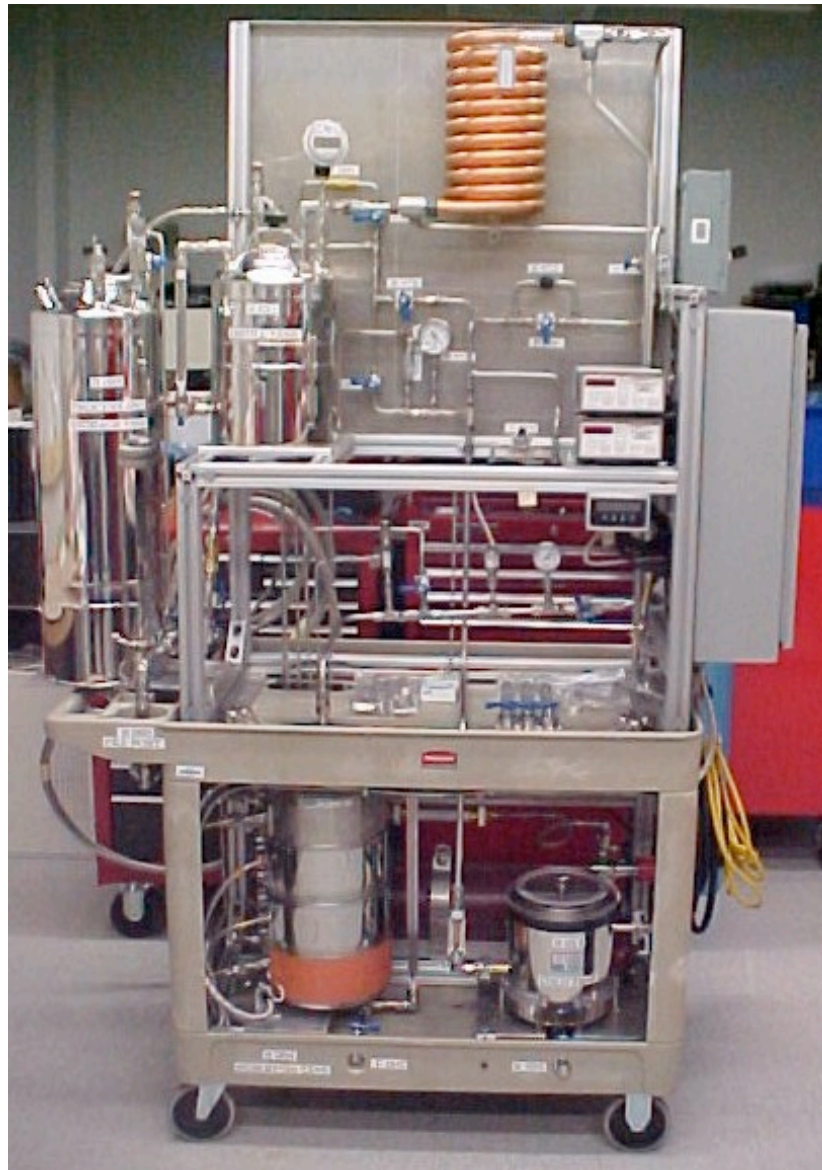


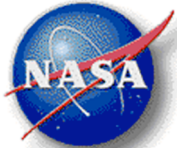


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GSE - Fluid DeGas/Fill Cart

BXF

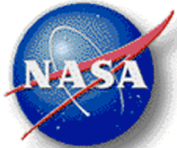




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GSE - Rotation Fixture *BXF*





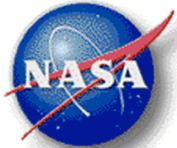
Specifications & On-Orbit Operations

BXF

Mass (Kg) ¹⁶	98.2 (up & down)
Volume (M³)	0.144
Max Power (kW)	0.777
Crew Time (Hrs)	8.0
Unattended Test Operations (Hrs)	MABE: 784 NPBX: 48

On-Orbit Operations

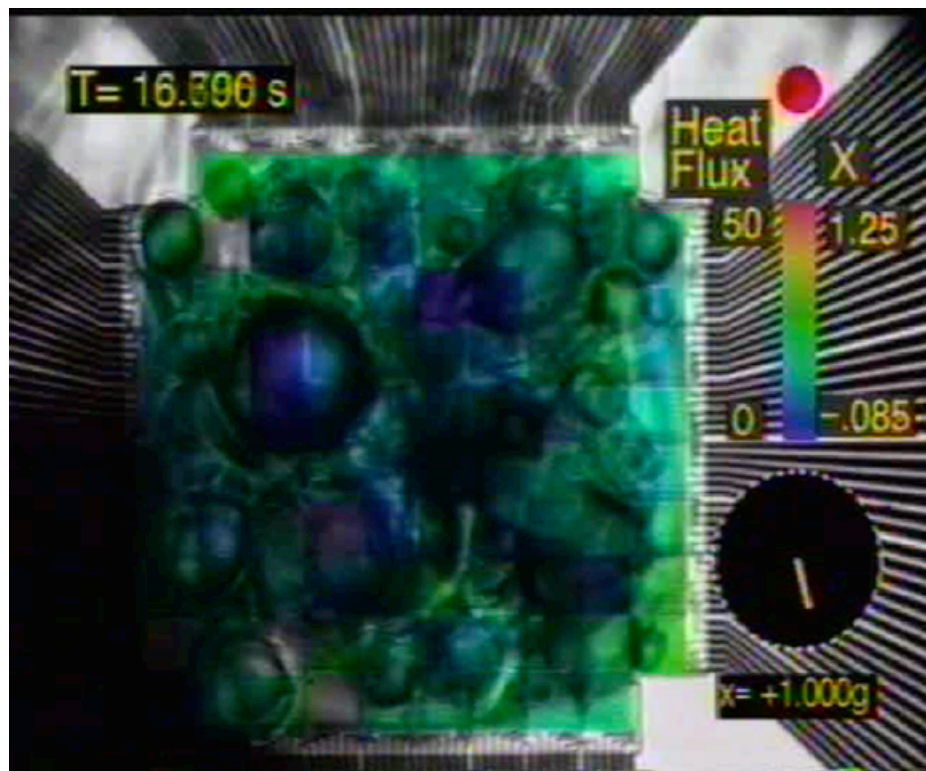
- Install BXF hardware into MSG
 - Includes SAMS TSH-ES installation & SAMS activation
- Set experiment parameters
- Perform experiment and record data
- Downlink data for evaluation
- Stow hardware



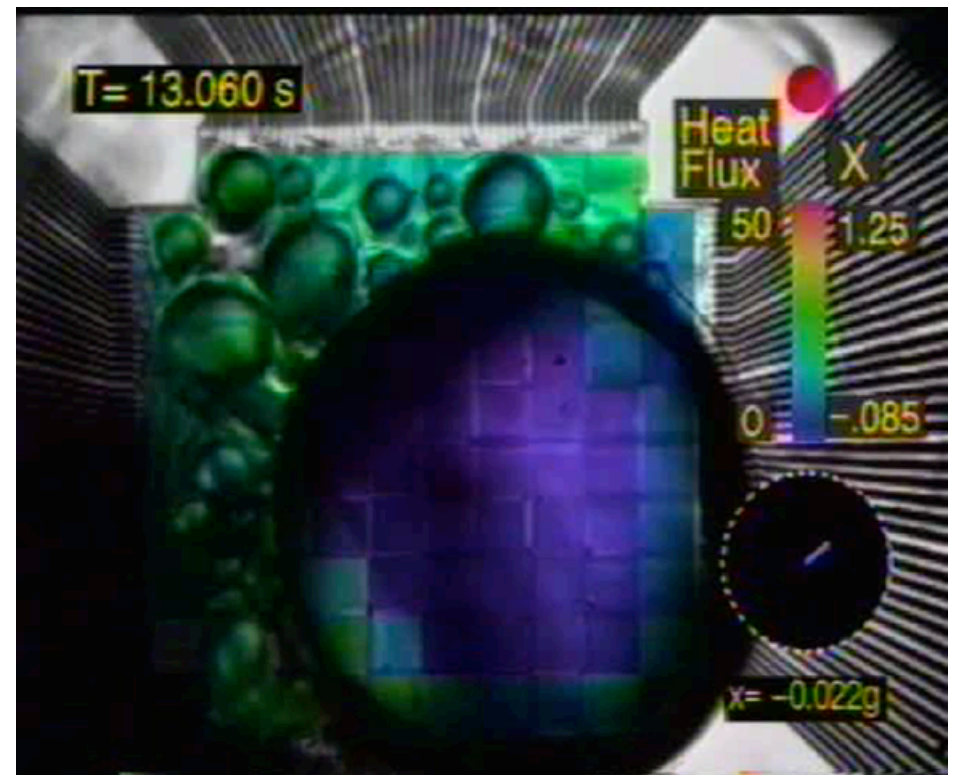
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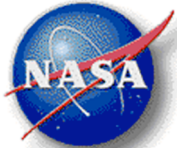
BXF

MABE in High g



MABE in Low g





BXF

NPBX in Low g

